Having thus described the preferred embodiment, the invention is now claimed to be:

1. An alloy suitable for use in fabricating a component to be used in molten melts which include magnesium, the alloy including iron, chromium, molybdenum, vanadium, niobium, cobalt, and tungsten, and at least one of boron and carbon, the alloy being essentially free of sulfur and phosphorus.

2. The alloy of claim 1, wherein the carbon is at a concentration is 0.4 to 2.0 weight %.

3. The alloy of claim 2, wherein the carbon concentration is 0.5-0.6 weight %.

4. The alloy of claim 1, wherein the boron is at a concentration of 0.15 to 0.50 weight %.

5. The alloy of claim 4, wherein the boron concentration is 0.20 - 0.30 weight %.

6. The alloy of claim 1, wherein the sulphur is at a concentration of less than about 0.005 weight %.

7. The alloy of claim 1, wherein the phosphorus is at a concentration of less than about 0.005 weight %.

8. The alloy of claim 1, wherein the chromium is at a concentration of 9 to 12 weight %.

9. The alloy of claim 8, wherein the chromium concentration is 10 to 11 weight %.

10. The alloy of claim 1, wherein the alloy further includes silicon at a concentration of less than about 1.0 weight %.

11. The alloy of claim 10, wherein the silicon concentration is less than about 0.8 weight %.

12. The alloy of claim 1, wherein the molybdenum is at a concentration of 5.0 to 8.0 weight %.

13. The alloy of claim 12, wherein the molybdenum concentration is 6.0 to 7.0 weight %.

14. The alloy of claim 1, wherein the tungsten is at a concentration of 2.5 to 4.0 weight %.

15. The alloy of claim 16, wherein the tungsten concentration is 3.0 to 3.5 weight %.

16. The alloy of claim 1, wherein the vanadium is at a concentration of 1.5 to 3.0 weight %.

17. The alloy of claim 16, wherein the vanadium concentration is 2.00 to 2.40 weight %.

18. The alloy of claim 1, wherein the niobium is at a concentration of 2.0 to 4.0 weight %.

19. The alloy of claim 18, wherein the niobium concentration is 2.80 to 3.20 weight %.

20. The alloy of claim 1, wherein the cobalt is at a concentration of 3.0 to 5.0 weight %.

21. The alloy of claim 20, wherein the cobalt concentration is 4.00 to 4.50 weight %.

22. The alloy of claim 1, further including tantalum at concentration of less than about 1.5 weight %.

23. The alloy of claim 1, further including manganese at a concentration of about 0.5-1.0 %.

24. The alloy of claim 1, wherein the alloy is substantially free of nickel.

25. The alloy of claim 24, wherein the alloy includes less than about 0.005 weight % nickel.

26. The alloy of claim 1, wherein the alloy includes, in terms of weight percent:

Boron	0.01 - 2.0
Carbon	0.01 - 2.0
Sulphur	0.00 - 0.005
Phosphorus	0.00 - 0.005
Chromium	5.0 - 15.0
Silicon	0.0 - 2.0
Molybdenum	2.0 - 12.00
Tungsten	0.5 - 10.00
Vanadium	0.5 - 5.0
Niobium	0.5 - 5.0
Cobalt	0.5 - 10.0

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27. The alloy of claim 26, wherein the alloy includes, in terms of weight percent:

Boron	0.20 - 0.30
Carbon	0.50 - 0.60
Chromium	10.0 - 11.0
Silicon	0.0 - 0.80
Molybdenum	6.0 - 7.0
Tungsten	3.00 - 3.50
Vanadium	2.00 - 2.40
Niobium	2.80 - 3.20
Cobalt	4.00 - 4.50

28. A component of equipment for use in molten melts which include magnesium, the component formed from the alloy of claim 1.

29. The component of claim 28, wherein the component is a component of a pump for moving molten metal.

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30. A method of forming a component suitable for submersion in a magnesium melt, the method comprising:

forming the component from an alloy which includes, in terms of weight percent:

Boron	0.01 - 2.0
Carbon	0.01 - 2.0
Chromium	5.0 - 15.0
Silicon	0.0 - 2.0
Molybdenum	2.0 - 12.00
Tungsten	0.5 - 10.00
Vanadium	0.5 - 5.0
Niobium	0.5 - 5.0
Cobalt	0.5 - 10.0

and which is essentially free of sulfur and phosphorus.

31. The method of claim 30, wherein the step of forming the component includes at least one of the group consisting of casting and machining.

32. The method of claim 31, wherein the alloy is substantially free of nickel.

33. A method of inhibiting dissolution of a component of equipment in a molten melt comprising magnesium, the method comprising:

1) forming the component from an alloy which includes, in terms of weight percent:

Boron	0.01 - 2.0
Carbon	0.01 - 2.0
Chromium	5.0 - 15.0
Silicon	0.0 - 2.0
Molybdenum	2.0 - 12.00
Tungsten	0.5 - 10.00
Vanadium	0.5 - 5.0
Niobium	0.5 - 5.0
Cobalt	0.5 - 10.0; and

2) contacting the component and the melt.

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